

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2016-XXXX

WASTE DISCHARGE REQUIREMENTS  
FOR  
ANDERSON LANDFILL, INC.  
ANDERSON LANDFILL  
CLASS III MUNICIPAL SOLID WASTE LANDFILL AND CLASS II SURFACE  
IMPOUNDMENTS  
OPERATION AND PARTIAL CLOSURE  
SHASTA COUNTY

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The California Regional Water Quality Control Board, Central Valley Region, (hereafter Central Valley Water Board) finds that:

1. Anderson Landfill, Inc., (hereinafter Discharger) a wholly owned subsidiary of USA Waste of California, Inc., owns and operates the Anderson Landfill (facility) about 3.5 miles southwest of Anderson, in Section 31, T30N, R4W, MDB&M, as shown in Attachment A, which is incorporated herein and made part of this Order by reference. The facility is a Class III municipal solid waste (MSW) landfill regulated under authority given in Water Code section 13000 et seq.; California Code of Regulations, title 27 ("Title 27"), section 20005 et seq.; and 40 Code of Federal Regulations section 258 (a.k.a, "Subtitle D") in accordance with State Water Resources Control Board (State Water Board) Resolution 93-62.
2. The following documents are attached to this Order and hereby incorporated into and made a part of this order by reference:
  - a. Attachment A – Site Location Map
  - b. Attachment B – Site Map
  - c. Information Sheet
  - d. December 2015 Standard Provisions and Reporting Requirements
3. The facility is on a 246-acre property at 18703 Cambridge Road, Anderson. The existing and future landfill area is approximately 130-acres of which approximately ~~100~~78 acres have been constructed. Existing landfill units, consist of three unlined units covering 53 acres and three existing compositely lined Units covering approximately ~~49~~39 acres, as shown in Attachment B, which is incorporated herein and made part of this Order. The facility also includes two existing surface impoundments covering 7 acres. The facility is comprised of Assessor Parcel Nos. 207-170-008, 207-170-009, 207-170-011, 207-170-

012, 207-170-013, 207-170-014, 207-170-015, 207-170-016, 207-170 -042, and 270-390-009.

4. Planned or future features at the facility include:

a. Composite liner for remaining areas of Class III land disposal unit, 4C,

~~a-b.~~ a new compositely-lined Class III land disposal unit, Unit 5,

~~b-c.~~ a new sediment detention pond, SED-5,

~~c-d.~~ an additional monitoring well MW-12, and,

~~d-e.~~ construction and implementation of a recycling facility and recycling program.

5. On 14 July 2015, the Discharger submitted a revised Joint Technical Document (JTD) for the landfill. The information in the JTD has been used in updating these waste discharge requirements (WDRs). The JTD contains the applicable information required in Title 27. The JTD and supporting documents contain information related to this update of the WDRs including:

a. Using bottom ash from forest-source, wood-fired cogeneration facilities as an alternative daily cover.

b. A new engineered alternative liner design for future liner construction.

c. Allowance of maximum permitted elevation increase to 769.5 ft MSL within an approximate 12-acre area of Unit 1.

d. ~~Approximate 200-ft shift~~ Future adjustment of the Unit 5 eastern boundary to add approximately 6 acres, for a total permitted landfill footprint of 130 acres.

e. Partial final closure of Unit 1, Unit 2B and Unit 2Ba.

f. Final closure of South Canyon Unit, ~~Unit 2B, Unit 2Ba,~~ and North of Cambridge Road Unit.

g. Plan for filling, final grading and final closure of the Unit 1 northwest corner.

6. On 5 August 2005, the Central Valley Water Board issued Order No. R5-2005-0118 in which the landfill waste management units at the facility were classified as Class III landfills for the discharge of municipal solid waste and the surface impoundments at the facility were classified as Class II units. This Order continues to classify the landfill units as Class III units and the surface impoundments as Class II units in accordance with Title 27. The North of Cambridge Road Unit remains unclassified.

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7. The existing and future land disposal units authorized by this Order are described as follows:

| Unit                         | Area <sup>6</sup>       | Liner/LCRS <sup>1</sup> Components <sup>2</sup>  | Unit Classification & Status                                 |
|------------------------------|-------------------------|--|--|
| Unit 1                       | 39.7 acres              | Unlined  | Class III, partial final closed                              |
| Unit 2A                      | 4.7 acres               | Unlined  | Class III, inactive  |
| Unit 2B                      | <del>5-86.8</del> acres | Unlined  | Class III, <u>partial final</u> closed, overlain by Unit 2Ba |
| North of Cambridge Road Unit | 2 acres                 | Unlined  | Unclassified, closed   |
| Unit 2Ba                     | <del>6-85.8</del> acres | <ul style="list-style-type: none"> <li>1-ft thick foundation layer,</li> <li>1-ft thick low-permeability soil with a hydraulic conductivity of <math>1 \times 10^{-6}</math> cm/sec<sup>3</sup> or less,</li> <li>geosynthetic clay liner,</li> <li>60-mil single-sided textured HDPE<sup>4</sup> geomembrane,</li> <li>1-ft thick blanket granular layer with minimum hydraulic conductivity of 0.3 cm/sec and 6 inch diameter HDPE perforated collection piping,</li> <li>8 oz/sy<sup>5</sup> non-woven geotextile filter layer, and,</li> <li>1-ft thick operations layer.</li> </ul>   | Class III, <u>partial final</u> closed                       |
| South Canyon                 | 7 acres                 | <ul style="list-style-type: none"> <li>2-ft thick foundation layer,</li> <li>geosynthetic clay liner,</li> <li>60-mil single-sided textured HDPE geomembrane,</li> <li><del>1-ft thick blanket granular layer with minimum hydraulic conductivity of 0.3 cm/sec and 6 inch diameter HDPE perforated collection piping,</del></li> <li><del>wrapped with gravel with minimum hydraulic conductivity of 0.3 cm/sec and 8 oz/sy non-woven geotextile filter layer,</del></li> <li><del>and,</del></li> <li><del>8 oz/sy non-woven geotextile filter layer, and,</del></li> <li>1-ft thick select operations layer with a minimum hydraulic conductivity of 0.01 cm/sec</li> </ul> | Class III, closed  |

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| Unit                                | Area <sup>6</sup>     | Liner/LCRS <sup>1</sup> Components <sup>2</sup>  | Unit Classification & Status |
|-------------------------------------|-----------------------|--|------------------------------|
| Units 4A,4B,4C, <u>4C Extension</u> | <u>35.626.5</u> acres | <ul style="list-style-type: none"> <li>1-ft thick low permeability soil with hydraulic conductivity of <math>1 \times 10^{-6}</math> cm/sec or less,</li> <li>geosynthetic clay liner,</li> <li>60-mil single-sided textured HDPE geomembrane <u>(double-sided textured in 4C extension)</u>,</li> <li>1-ft thick blanket granular layer with minimum hydraulic conductivity of 0.3 cm/sec <u>(floor only)</u> and 6 inch diameter HDPE perforated collection piping,</li> <li>8 oz/sy non-woven geotextile filter layer, and,</li> <li>1-ft thick operations layer <u>(or select operations layer on slopes)</u></li> </ul> | Class III, active            |
| Remainder of Unit 4                 | <u>- 11.2</u> acres   | <ul style="list-style-type: none"> <li>Prepared subgrade,</li> <li>geosynthetic clay liner,</li> <li>80-mil double-sided textured HDPE geomembrane, <u>and</u></li> <li><del>1-ft thick blanket granular layer with minimum hydraulic conductivity of 0.3 cm/sec and 6 inch diameter HDPE perforated collection piping,</del></li> <li><del>8 oz/sy non-woven geotextile filter layer, and,</del></li> <li><del>1-ft thick operations layer</del> <u>1.5-foot thick select operations layer</u></li> </ul>   | Class III, future            |
| Unit 5                              | <u>37.243.7</u> acres | <ul style="list-style-type: none"> <li>Prepared subgrade,</li> <li>geosynthetic clay liner,</li> <li>80-mil double-sided textured HDPE geomembrane,</li> <li>1-ft thick blanket granular layer with minimum hydraulic conductivity of 0.3 cm/sec and 6 inch diameter HDPE perforated collection piping <u>(floor only)</u>,</li> <li>8 oz/sy non-woven geotextile filter layer <u>(floor only)</u>, and,</li> <li><u>1.5-ft thick operations layer</u></li> </ul>  | Class III, future            |

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| Unit  | Area <sup>6</sup> | Liner/LCRS <sup>1</sup> Components <sup>2</sup>   | Unit Classification & Status         |
|-------|-------------------|---|--------------------------------------|
|       |                   | (select operations layer on slope)  |                                      |
| ELP   | 4.2 acres         | <ul style="list-style-type: none"> <li>1-ft low-permeability soil with a hydraulic conductivity of <math>1 \times 10^{-6}</math> cm/sec or less,</li> <li>secondary 60-mil double side textured HDPE geomembrane,</li> <li>double sided geocomposite (leak detection layer),</li> <li>geosynthetic clay liner, and,</li> <li>primary 60-mil single side textured HDPE geomembrane</li> </ul>  | Class II Surface Impoundment, active |
| LSI-2 | 3.2               | <ul style="list-style-type: none"> <li>1-ft low-permeability soil with a hydraulic conductivity of <math>1 \times 10^{-6}</math> cm/sec or less,</li> <li>secondary 60-mil double side textured HDPE geomembrane,</li> <li>double sided geocomposite (leak detection layer),</li> <li>geosynthetic clay liner,</li> <li>primary 60-mil single side textured HDPE geomembrane, and,</li> <li>sacrificial 40-mil HDPE geomembrane on side slopes</li> </ul> | Class II Surface Impoundment, active |

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<sup>1</sup> LCRS – Leachate collection and removal system

<sup>2</sup> All liner systems are composite liner systems unless otherwise noted

<sup>3</sup> cm/sec – Centimeter per second

<sup>4</sup> HDPE- High Density Polyethylene

<sup>5</sup> oz/sy – ounces per square yard

<sup>6</sup> Areas include overlaps (e.g., Unit 2Ba overlies Unit 2B). Therefore the sum of all unit areas is greater than the actual total plan footprint of the landfill (i.e., 130 acres).

8. On-site facilities at the Anderson Landfill include: an active landfill gas extraction system, a landfill gas flare, scales and scalehouse, public drop-off and recycling sorting area, administrative/maintenance building, diesel fuel shed and hazardous materials storage area. The Discharger has obtained approval from Shasta County Planning Division to implement a recycling operation at the Anderson Landfill. Approximately 20 to 25 tons per day of materials are anticipated to be recycled during the landfill operating hours. This recycling facility will be implemented at an unknown date in the future.
9. On 9 October 1991, the United States Environmental Protection Agency (USEPA) promulgated federal MSW regulations under the Resource Conservation and Recovery Act (RCRA), Subtitle D. These regulations are under 40 Code of Federal Regulations section 258, and are hereafter referred to as either "Subtitle D" in reference to the RCRA

federal law that required the regulations or “40 C.F.R. section 258.XX”. These regulations apply to all California Class II and Class III landfills that accept MSW. State Water Board Resolution 93-62 requires the Central Valley Water Board to implement in WDRs for MSW landfills the applicable provisions of the federal MSW regulations that are necessary to protect water quality, and in particular the containment provisions and the provisions that are either more stringent or that do not exist in Title 27.

10. This Order implements the applicable regulations for discharges of solid waste to land through Prohibitions, Specifications, Provisions, and monitoring and reporting requirements. Prohibitions, Specifications, and Provisions are listed in Sections A through H of these WDRs below, and in the Standard Provisions and Reporting Requirements (SPRRs) dated December 2015 which are part of this Order. Monitoring and reporting requirements are included in the Monitoring and Reporting Program (MRP) No. R5-2016-XXXX and in the SPRRs. In general, requirements that are either in regulation or otherwise apply to all MSW landfills are considered to be “standard” and are therefore in the SPRRs. Any site-specific changes to a requirement in the SPRRs are included in the applicable section (A through H) of these WDRs, and the requirement in the WDRs supersedes the requirement in the SPRRs.
11. Title 27 contains regulatory standards for discharges of solid waste promulgated by the State Water Board and the California Department of Resources Recovery and Recycling (CalRecycle). In certain instances, this Order cites CalRecycle regulatory sections. Title 27, section 20012 allows the Central Valley Water Board to cite CalRecycle regulations from Title 27 where necessary to protect water quality provided it does not duplicate or conflict with actions taken by the Local Enforcement Agency in charge of implementing CalRecycle’s regulations.

## WASTE CLASSIFICATION AND UNIT CLASSIFICATION

12. The Discharger proposes to continue to discharge nonhazardous solid waste, including municipal solid waste, friable asbestos, fly ash, wood ash, treated medical waste, petroleum and other contaminated soils, construction and demolition waste, material recycling facility fines, treated auto shredder waste, and shredded tires, to lined Class III landfill units (Units 4 and 5) and unlined Class III landfill units (Units 1 and 2A) at the facility. Leachate will continue to be discharged to the two Class II surface impoundments (ELP and LSI-2). These classified wastes may be discharged only in accordance with Title 27, Resolution 93-62, and Subtitle D as required by this Order.
13. The Discharger also accepts primary and secondary sewage sludge from local wastewater treatment plants and sludge from local septage ponds. Such wastes can be accepted at Class III landfills providing the conditions described in Title 27, Section 20220(c) are met. Sludge is characterized to assure it is nonhazardous prior to disposal in compositely lined Units with leachate collection and removal systems (LCRS). The Discharger accepts sewage sludge for disposal provided it meets acceptance criteria outlined in Appendix F of the July 2015 *Joint Technical Document*.
14. Active unlined landfill units at the facility are "existing units" under Title 27 that were permitted before 27 November 1984 and may continue to accept waste in the "Existing Footprint" until ready for closure unless waste receipts do not meet the timeframes and amounts in Title 27, section 21110, or they are required to close sooner to address environmental impacts or other regulatory concerns. The "Existing Footprint" as defined in Title 27, section 20164 is the area that was covered by waste as of the date that the landfill unit became subject to Subtitle D. The Existing Footprint for the active unlined areas of the landfill is shown on Attachment B.
15. The Discharger proposes to continue to discharge wastes containing greater than one percent (>1%) friable asbestos to Unit 2A. These wastes are classified as 'hazardous' under California Code of Regulations, title 22 (Title 22). However, these wastes do not pose a threat to groundwater quality and California Health and Safety Code, section 25143.7 permits their disposal in any landfill that has WDRs that specifically permit the discharge, provided that the wastes are handled and disposed of in accordance with applicable statutes and regulations.
16. The Discharger proposes to continue to discharge treated wood waste in the composite-lined units at the landfill. Title 22 defines "treated wood" to mean wood that has been treated with a chemical preservative for purposes of protecting the wood against attacks from insects, microorganisms, fungi, and other environmental conditions that can lead to decay of the wood and the chemical preservative is registered pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA; 7 U.S.C. Sec. 136 and following). This may include but is not limited to waste wood that has been treated with chromated copper arsenate (CCA), pentachlorophenol, creosote, acid copper chromate (ACC),



ammoniacal copper arsenate (ACA), ammoniacal copper zinc arsenate (ACZA), or chromated zinc chloride (CZC).

17. Title 22, section 67386.11 allows treated wood waste to be discharged to a composite-lined portion of a MSW landfill that is regulated by WDRs issued pursuant to the Water Code provided that the landfill owner/operator:
  - a. Comply with the prohibitions in Title 22, section 67386.3, which are:
    - i. Treated wood waste shall not be burned, scavenged, or commingled with other waste prior to disposal, stored in contact with the ground, recycled without treatment (except as in iii, below), treated except in compliance with Title 22, section 67386.10, or disposed to land except in compliance with Title 22, section 67386.11.
    - ii. Any label or mark that identifies the wood and treated wood waste shall not be removed, defaced, or destroyed.
    - iii. Treated wood waste may be recycled only by reuse when all of the following apply:
      - (1) Reuse is on-site.
      - (2) Reuse is consistent with FIFRA-approved use of the preservative.
      - (3) Prior to reuse, treated wood waste is handled in compliance with Title 22, division 4.5, chapter 34.
  - b. Ensure treated wood waste is managed at the landfill according to Title 22, division 4.5, chapter 34 prior to disposal.
  - c. Monitor the landfill for a release and if a verified release is detected from the unit where treated wood is discharged, the disposal of treated wood will be terminated at the unit with the verified release until corrective action ceases the release. .
  - d. Handle treated wood waste in a manner consistent with the applicable sections of the California Occupational Safety and Health Act of 1973.
18. Title 27, section 20690 allows the use of alternative daily cover (ADC) at MSW landfills upon approval by the Local Enforcement Agency (LEA) and concurrence from CalRecycle. Title 27, section 20705 provides the Water Board's regulations for all daily and intermediate cover including that it shall minimize the percolation of liquids through waste and that the cover shall consist of materials that meet the landfill unit classification (Class II or Class III). The regulations also require that for non-composite lined portions of the landfill, that any contaminants in the daily or intermediate cover are mobilized only at concentrations that would not adversely affect beneficial uses of waters of the state in the

event of a release. For composite-lined portions of the landfill, the regulations require that constituents and breakdown products in the cover material are listed in the water quality protection standard.

19. The Discharger uses the following materials for ADC: geosynthetic fabric or panel products, sludge and sludge-derived materials, processed construction and demolition materials, nonhazardous petroleum-contaminated soil, shredded tires, wood ash, fly ash and bottom ash. In July 2015, the Discharger completed a demonstration project for the approval of bottom ash as an ADC. The Discharger has demonstrated that these materials will minimize percolation of liquids through waste, that the materials meet the unit classification where they will be discharged, and that the constituents and breakdown products are included in the water quality protection standard.
20. Landfills propose new ADC materials regularly in order to preserve landfill air space and to beneficially reuse waste materials. Title 27, section 20686 includes regulations for beneficial reuse, including use of ADC. Approval of ADC is primarily handled by the LEA and CalRecycle under Title 27, section 20690. This Order allows any ADC proposed for use at the facility after the adoption of this Order to be approved by Central Valley Water Board staff provided the Discharger has demonstrated it meets the requirements in Title 27, section 20705. The approved ADC materials should then be listed in the facility's WDRs during the next regular update or revision with information about the Discharger's demonstration. This Order also includes a requirement that ADC only be used in internal areas of the landfill unless the Discharger demonstrates that runoff from the particular ADC is not a threat to surface water quality. The demonstration can take sedimentation basins into account.
21. Leachate accumulating in the leachate collection sump of the South Canyon Unit is pumped to intermediate storage tanks and hauled to the Class II surface impoundments. Leachate accumulating in the leachate collection sump of Unit 2Ba, is routed to the leachate collection sump of Unit 4, and then pumped to the Class II surface impoundments. Leachate accumulating in the leachate collection sump of Unit 4 is pumped directly to the Class II surface impoundments. Leachate and/or landfill gas condensate may be returned only to the South Canyon Unit, Unit 2Ba, Unit 4 and future composite lined modules.

#### **SITE DESCRIPTION**

22. The facility is located on the south side of an east-west trending ridge, between the ridge top and valley bottom. The ridge top is a remnant of a plateau that has been dissected by gullies and intermittent stream channels. The average slope from the ridge top to the valley bottom ranges from 10 horizontal to 1 vertical (10H:1V) at the northwest end of the landfill to 20H:1V at the center of the landfill, although local drainages have slopes as steep as 2H:1V. The maximum surface elevation is approximately 730 feet MSL on the ridge top. The minimum surface elevation is approximately 580 ft MSL in the valley bottom. No springs have been observed on-site or within one mile of the site. The

principal surface water body at the site is an unnamed tributary to Cottonwood Creek, located about three miles southeast of the property boundary. This unnamed stream flows intermittently and only during local rainfall events. Stormwater discharging from the site is predominantly divided into north and south flows. The southern portion of the site drains to the south and east into the Cottonwood Creek watershed. The northern portion drains to the north and east into the Anderson Creek watershed. Cottonwood Creek and Anderson Creek then flow into the Sacramento River seven miles east and six miles northeast of the facility, respectively.

23. Land uses within one mile of the facility include undeveloped grazing land to the north, south and west, rural residential to the east, and a regional septage receiving facility is located about a mile to the northwest of the facility.
24. There are 85 known water wells within one mile of the facility, 45 of which are water supply wells. The Discharger owns 24 of these wells, five of which are water supply wells. Appendix D-4 of the July 2015 JTD contains the well location map and a summary table of the wells identified.
25. The facility is located in the Central Valley Geologic Province of California and southwestern part of the Redding groundwater basin, which is underlain by the Red Bluff and Tehama Formations. The Red Bluff Formation outcrops on the north edge of the facility and ranges from 2 to 40 feet in thickness. The Tehama Formation underlies the majority of the filled areas. It consists of dense silt and clay interbedded with sand and gravel. All groundwater and gas monitoring wells at the facility are completed in the Tehama Formation. Older (and deeper) pre-Tertiary units have not been encountered while drilling at the site. The Tehama Formation is the main source of drinking water in the vicinity of the facility.
26. In-situ, unsaturated hydraulic conductivity of the Tehama Formation at the facility, approximately 20 to 65 feet below ground surface, ranges from approximately  $3 \times 10^{-6}$  to  $7 \times 10^{-5}$  centimeters per second (cm/sec). Saturated hydraulic conductivity in the deep groundwater zone, as measured in wells MW-2 and MW-3, ranges from  $1.5 \times 10^{-4}$  to  $5 \times 10^{-4}$  cm/sec.
27. A seismic hazard evaluation has been performed to identify the maximum probable earthquake (MPE) and the maximum credible earthquake (MCE) for the facility. Class III landfills must be designed to withstand forces resulting from the MPE and Class II surface impoundments must be designed to withstand forces resulting from the MCE. No evidence of faulting has been observed at the facility. The nearest mapped fault is 7.5 miles east-northeast of the facility but is not active. The nearest potentially active fault (showing Quaternary-age displacement) is the Battle Creek Fault, located 14 miles east of the site. Both a near-field and a far-field event were identified as seismic design events and used for determining the MPE for the facility. The MPE near-field event on the Battle Creek fault is a moment magnitude ( $M_w$ ) 6.0 event with a peak horizontal ground acceleration (PHGA) of 0.24 g. The far-field event used in the MPE determination and

Unit design is a  $M_w$  6.5 event on the Hat Creek-McArthur-Mayfield fault system with a PHGA of 0.05 g. A near-field and far-field event were also identified as seismic design events and used in determining the MCE for the facility. The MCE near-field event on the Battle Creek fault is a  $M_w$  6.5 event that generates expected free-field bedrock PHGA of 0.29 g. The MCE far-field event is a  $M_w$  7.0 event on the Hat Creek-McArthur-Mayfield fault system that generates an expected free-field bedrock PHGA of 0.06 g. Slope stability analyses were performed and a static factor of safety greater than or equal to 1.5 was achieved for each critical cross section that was evaluated.

28. The facility receives approximately 30 inches of precipitation per year as measured at the Anderson 9WNW Station. The mean pan evaporation is 79 inches per year as measured at the Anderson 9WNW Station.
29. The 100-year, 24-hour precipitation event for the facility is estimated to be 6.65 inches, based on the National Oceanic and Atmospheric Administration (NOAA) Atlas 14.
30. The 1,000-year, 24-hour precipitation event for the facility is estimated to be 8.72 inches, based on NOAA Atlas 14.
31. The southern part of the property is located within the 100-year flood plain as indicated by Federal Emergency Management Agency (FEMA) Flood Map Nos. 060358-900C and 060358-0895. However, none of the waste containment structures, units, or ancillary facilities are located within the 100-year flood plain.
32. Storm water sedimentation basins are located south of the landfill as shown on Attachment B. The basins detain storm water for sedimentation control during the rainy season and are normally dry during the summer months. The sedimentation basins discharge to an unnamed tributary to Cottonwood Creek.

#### **SURFACE WATER AND GROUNDWATER CONDITIONS**

33. The *Water Quality Control Plan for Sacramento and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.
34. Surface water drainage from the site is to an unnamed tributary of Cottonwood Creek thence to Cottonwood Creek.
35. The designated beneficial uses of Cottonwood Creek, as specified in the Basin Plan, are municipal and domestic supply; agricultural supply; water contact recreation; non-contact water recreation; warm fresh water habitat; cold freshwater habitat; cold water migration of aquatic organisms; spawning, reproduction, and/or early development; and wildlife habitat.
36. Two groundwater-bearing zones are known to occur at the site. First encountered groundwater, referred to as the shallow zone, is found from 55 to 70 feet below native

ground surface directly north, northwest, and east of Unit 1 and is thought to be perched and not laterally continuous. The shallow groundwater unit is not known to be used for production purposes. Confined, laterally continuous, groundwater, referred to as the deep zone, is encountered from 270 to 300 feet below ground surface (BGS) (approximately 150 to 200 feet below the deepest waste). The deep groundwater zone is regionally used for domestic, industrial and agricultural production. During construction of Units 4 and 5, the Discharger proposes to excavate soil to grades below the perched groundwater zone. If encountered, Perched groundwater will be collected in interceptor trenches on the west, north, and east sides of Units 4 and 5 as cell development occurs. The interceptor trench on the west side of Unit 4 adjacent to unlined Unit 1 will drain to a separate collection sump from the rest of the interceptor drain system so that liquids can be tested and managed appropriately.

37. Monitoring data indicate background groundwater quality the shallow groundwater zone has electrical conductivity (EC) ranging between 200 and 370 micromhos/cm, with total dissolved solids (TDS) ranging between 190 and 320 milligrams per liter (mg/L). Monitoring data indicate background groundwater quality for the deep groundwater zone has electrical conductivity (EC) ranging between 200 and 230 micromhos/cm, with total dissolved solids (TDS) ranging between 140 and 170 mg/L.
38. The direction of groundwater flow in the deep groundwater zone is northeast. The average groundwater gradient in the deep zone is approximately 0.03 feet per foot and the average velocity is approximately 0.14 feet per day. Groundwater flow in the shallow (perched) zone is also towards the northeast, except at the northwest corner of the site where a western flow direction is observed. The average groundwater gradient in the shallow zone is approximately 0.02 feet per foot and the average velocity is approximately 0.001 feet per day.
39. The designated beneficial uses of the groundwater, as specified in the Basin Plan, are domestic and municipal water supply, agricultural supply, industrial service supply, and industrial process supply.

#### **GROUNDWATER AND UNSATURATED ZONE MONITORING**

40. The current groundwater monitoring network at Anderson Landfill consists of background monitoring well MW-3 and detection monitoring wells SM-1, MW-4A, MW-8, MW-9, MW-10, MW-11. Monitoring wells MW-3, MW-4A, MW-9, MW-10 and MW-11 are completed in the deep (confined) groundwater zone and monitoring wells SM-1 and MW-8 are completed in the shallow (perched) groundwater zone. Gas monitoring wells GM-6D and GM-9D are utilized in the shallow groundwater monitoring program because they are completed and screened across the shallow (perched) zone and consistently yield sufficient water for sampling purposes. The Discharger proposes to install an additional compliance well (MW-12) once the final cell of Unit 5 is constructed. MW-12 will be installed along the east property boundary south of MW-11.

- a. The monitoring system assessing the deep (confined) groundwater consists of the following:
    - i. Background well is MW-3. MW-3 is 312 feet deep with a screen interval between 292 and 312 feet BGS. MW-3 is located outside of the permitted waste disposal area south of Unit 1.
    - ii. Compliance or down and cross gradient wells include MW-4A, MW-9, MW-10 and MW-11. MW-4A is 362 feet deep with a screen interval between 339 and 362 feet BGS. MW-9 is 358 feet deep with a screened interval between 340 and 350 feet BGS, MW-10 is 360 feet deep with a screened interval between 337 and 357 feet BGS and MW-11 is 365 feet deep with a screened interval between 345 and 365 feet BGS. MW-4A is located just north of the northwest corner of Unit 4. MW-9, MW-10 and MW-11 are located northeast of Units 4 and 5 near the Class II surface impoundment.
    - iii. The Discharger proposes to install an additional compliance well (MW-12) once the final cell of Unit 5 is constructed. MW-12 will be installed along the east property boundary south of MW-11.
  - b. The monitoring system assessing the shallow (perched) groundwater consists of the following:
    - i. SM-1, located south of the South Canyon Unit, is 30 feet deep. .
    - ii. MW-8, located directly north of Units 1 and 4 near deep well MW-4A, is 75 feet deep with a screen interval between 62 and 72 feet BGS.
    - iii. GM-6D is 75 feet deep with a screen interval between 68 and 73 feet BGS.
    - iv. GM-9D is 73.5 feet deep with a screen interval between 61 and 71 feet BGS.
  - c. Future changes to the groundwater monitoring system may be proposed for Central Valley Water Board Executive Officer review and approval.
41. At the time this Order was adopted, the Discharger's detection monitoring program for groundwater at the landfill satisfied the requirements contained in Title 27.
42. The existing vadose zone monitoring system consists of pan lysimeters installed at strategic locations beneath or adjacent to existing Units.
- a. Pan lysimeters/leak detection systems exist beneath the LCRS sumps in Unit 4 and the leak detection sumps of the Class II surface impoundments. Pan lysimeter VZM-4A was located beneath the temporary LCRS sump in Unit 4A- and Ppan lysimeter VZM-4B was located beneath the temporary LCRS sump in Unit 4B. As construction of Units 4A and 4B progressed, pan lysimeters VZM-4A and VZM-4B were

decommissioned, and the respective LCRS sumps were ~~pipec-removed~~. The blanket LCRS and collection pipes in Units 4A and 4B were then connected hydraulically to the LCRS sump in Unit 4C. Pan lysimeter VZM-4C is located beneath the LCRS sump in Unit 4C. Pan lysimeter EPOND-VZM is located beneath the leak detection sump of the Eastern Leachate Pond (ELP). Pan lysimeter WPOND-VZM is located beneath the leak detection sump (WLP-LD) of LSI-2.

- b. Pan lysimeters/leak detection systems exist beneath the LCRS sumps in Unit 4 and the leak detection sumps of the Class II surface impoundments.

43. ~~The Discharger proposes to install new pan lysimeters/leak detection systems below future LCRS sumps in each cell constructed for Units 4 and 5.~~

44. Volatile organic compounds (VOCs) are often detected in a release from a MSW landfill and are often associated with releases of landfill gas rather than leachate. Since VOCs are not naturally occurring and thus have no background value, they are not amenable to the statistical analysis procedures contained in Title 27 for the determination of a release of wastes from a landfill unit. Title 27, sections 20415(e)(8) and (9) allows the use of a non-statistical evaluation of monitoring data that will provide the best assurance of the earliest possible detection of a release from a landfill unit in accordance with Title 27, sections 20415(b)(1)(B)2.-4. However, Title 27 does not specify a specific method for non-statistical evaluation of monitoring data.

45. The Central Valley Water Board may specify a non-statistical data analysis method pursuant to Title 27, section 20080(a)(1). Water Code section 13360(a)(1) allows the Central Valley Water Board to specify requirements to protect groundwater or surface waters from leakage from a solid waste site, which includes a method to provide the best assurance of determining the earliest possible detection of a release.

46. In order to provide the best assurance of the earliest possible detection of a release of non-naturally occurring waste constituents from a landfill unit, the SPRRs specify a non-statistical method for the evaluation of monitoring data for non-naturally occurring compounds. The specified non-statistical method for evaluation of monitoring data provides two criteria (or triggers) for making the initial determination that there has been a possible release of non-naturally occurring waste constituents from a landfill unit. The presence of two non-naturally occurring waste constituents above their respective method detection limit (MDL), or one non-naturally occurring waste constituent detected above its practical quantitation limit (PQL) [a.k.a, laboratory reporting limit (RL)], indicates there is initial evidence of a release of waste from a Unit has occurred. Following an initial indication of a release, verification testing must be conducted to determine whether there has been a release from the landfill unit or the detection was a false positive. The detection of two non-naturally occurring waste constituents above the MDL as a trigger is appropriate due to the higher risk of false-positive analytical results and the corresponding increase in sampling and analytical expenses from the use of one non-naturally occurring waste constituent above its MDL as a trigger.

47. For a naturally occurring constituent of concern, the Title 27 requires concentration limits for each constituent of concern be determined as follows:
- a. By calculation in accordance with a statistical method pursuant to Title 27, section 20415(e)(8); or
  - b. By an alternate statistical method meeting the requirements of Title 27, section 20415(e)(8)(E).
48. The Discharger submitted an 11 October 2005 Water Quality Protection Standard (WQPS) report proposing statistical data analysis methods to calculate concentration limits for select monitored constituents in accordance with Title 27. The WQPS report proposed to use intrawell data analysis to calculate control limits for the monitored constituents. The WQPS and approved data evaluation methods are included in MRP No. R5-201X-XXXX.

#### **GROUNDWATER CONDITIONS**

49. Sporadic detections of xylenes, toluene, and methylene chloride were observed in suction lysimeters at the site prior to 1995. However, no VOCs have been detected in unsaturated zone monitoring devices since July 1994.
50. No impacts have been confirmed in shallow (perched) groundwater to date.
51. Xylenes, toluene, and methylene chloride were sporadically detected in deep groundwater from wells MW-1 and MW-5 prior to 1996. Previously observed high levels of methylene chloride in well MW-5 were attributed to electrical tape or other foreign substance associated with the first pump that was installed. That pump was pulled in October 1992, the well blown out with air, and a new pump installed. No organic compounds have been detected in well MW-5 since that time, and no organic compounds have been detected in deep groundwater since 1995. Several VOCs have been detected below MDLs at deep wells MW-4A, MW-9 and MW-11 and shallow well MW-8. However, resamples obtained shortly after the initial detections found no VOCs above MDLs at these monitoring points. Currently, it does not appear that the landfill is imparting organic compounds to deep groundwater.

#### **LINER PERFORMANCE DEMONSTRATION**

52. On 15 September 2000 the Central Valley Water Board adopted Resolution No. 5-00-213 *Request For The State Water Resources Control Board To Review The Adequacy Of The Prescriptive Design Requirements For Landfill Waste Containment Systems To Meet The Performance Standards Of Title 27*. The State Water Board responded, in part, that "a single composite liner system continues to be an adequate minimum standard" however, the Central Valley Water Board "should require a more stringent design in a case where it determines that the minimum design will not provide adequate protection to a given body of groundwater."



In a letter dated 17 April 2001, the Executive Officer notified Owners and Operators of Solid Waste Landfills that “the Board will require a demonstration that any proposed landfill liner system to be constructed after 1 January 2002 will comply with Title 27 performance standards. A thorough evaluation of site-specific factors and cost/benefit analysis of single, double, and triple composite liners will likely be necessary.”

53. On 3 June 2005 the Discharger submitted a liner performance demonstration for Units 4 and 5, which demonstrated that the proposed liner system will comply with applicable Title 27 performance standards. The overall performance of the liner system depends on site- and design-specific factors such as site and waste characteristics, the proposed landfill liner and containment system, construction quality assurance, and estimated liner leakage. Liner leakage is considered most important of the factors mentioned above. The Discharger used the Hydrologic Evaluation of Landfill Performance (HELP) model to determine leachate generation, head above the liner system, surface runoff, and leakage through the liner system. The calculated leakage rate through the liner system was used as an input parameter for MULTIMED modeling, which is used to evaluate potential impacts to groundwater from liner defects. Modeling indicated that the hydraulic efficiency of the proposed single composite liner system was 99.9998%. Double and triple composite liner systems were also evaluated, and the hydraulic efficiency of these types of liner systems was calculated to be 100%. The double or triple liner system provided for an increase in liner hydraulic efficiency of only 0.0002%. A cost-benefit analysis was performed to compare single, double, and triple liners. The cost of a double liner system increased the cost by \$58,980 per acre over a single liner system, and a triple liner system increased the cost by \$58,981 per acre more than a double liner system. The liner performance evaluation concluded that the single composite liner system provided adequate protection to groundwater and the additional costs of more than \$58,000 per acre for an extra composite liner would be significantly burdensome and provide only minimal improvements.

54. On 27 May 2014 the Discharger submitted an *Updated Liner Performance Evaluation* for a new proposed engineered alternative base liner system. The previously approved 3 June 2005 design was used to construct the base liner system for Units 4A, 4B and 4C. During construction of the base liner for Unit 4C [Extension](#), the Discharger exhausted most of its easily accessible on-site clay deposits. The Discharger has identified additional clay deposits at the site, but they occur under significant overburden. Due to the difficulty and cost of mining the clay, the Discharger proposed a new engineered alternative base liner design for future Unit expansions. The new engineered alternative base liner design consists of a(n) (in ascending order):

#### **Base Liner Design**

- prepared subgrade of compacted general fill,
- geosynthetic clay liner,
- 80-mil double textured HDPE geomembrane liner,
- 1-foot thick LCRS granular layer (floor only),

- 8-oz/sy geotextile filter fabric (floor only), and,
- 1.5 foot thick operations layer on the floor and a 1.5 foot thick select operations layer on the side slopes.

The Discharger used the HELP model to determine the leakage rate for the proposed liner system. The calculated average annual infiltration rate through the proposed sideslope and floor liner system is 0.052 cubic feet per acre per year (cf/ac/yr) and 0.067 cf/ac/yr, respectively. The calculated average annual leakage rate for the newly proposed liner system is less than the calculated average annual leakage rate of the previous liner system and the Title 27 prescriptive liner system. The proposed liner system was also assessed for puncture resistance. The proposed liner system was found to have superior puncture resistance as compared to the previous liner design. Additionally, a cost analysis was performed to evaluate alternative liner designs utilizing double and triple geomembranes, imported clay and amending available soils with bentonite. The proposed liner system was found to be the least expensive design. Central Valley Water Board staff approved the proposed design on 6 June 2014.

#### **CONSTRUCTION AND ENGINEERED ALTERNATIVE**

55. On 17 June 1993, the State Water Board adopted Resolution 93-62 implementing a State Policy for the construction, monitoring, and operation of MSW landfills that is consistent with the federal MSW regulations promulgated under 40 Code of Federal Regulations section 258 (a.k.a, Subtitle D). Resolution 93-62 requires the construction of a specified composite liner system at new MSW landfills, or expansion areas of existing municipal solid waste landfills, that receive wastes after 9 October 1993. Resolution 93-62 also allows the Central Valley Water Board to consider the approval of engineered alternatives to the prescriptive standard. Section III.A.b. of Resolution 93-62 requires that the engineered alternative liner systems be of a composite design similar to the prescriptive standard.

56. Title 27, section 20080(b) allows the Central Valley Water Board to consider the approval of an engineered alternative to the prescriptive standard. In order to approve an engineered alternative in accordance with Title 27, sections 20080(c)(1) or (2), the Discharger must demonstrate that the prescriptive design is unreasonably and unnecessarily burdensome and will cost substantially more than an alternative which will meet the criteria contained in Title 27, section 20080(b), or would be impractical and would not promote attainment of applicable performance standards. The Discharger must also demonstrate that the proposed engineered alternative liner system is consistent with the performance goal addressed by the particular prescriptive standard, and provides protection against water quality impairment equivalent to the prescriptive standard in accordance with Title 27, section 20080(b)(2).

57. Water Code section 13360(a)(1) allows the Central Valley Water Board to specify the design, type of construction, and/or particular manner in which compliance must be met in

waste discharge requirements or orders for the discharge of waste at solid waste disposal facilities.

58. The Discharger proposes a liner system which will be designed, constructed, and operated in accordance with the criteria set forth in Title 27, and the provisions in State Water Board Resolution 93-62 for MSW.
59. On 14 July 2015, the Discharger submitted a Joint Technical Document requesting approval of an engineered alternative to the prescriptive standard for liner requirements for the remainder of Unit 4 and all future landfill modules at the facility. The engineered alternative liner proposed by the Discharger for the bottom liner of the future landfill modules consists of a(n) (in ascending order):

#### **Bottom Floor Liner**

- prepared subgrade of compacted general fill,
- geosynthetic clay liner,
- 80-mil double textured HDPE geomembrane liner,
- 1-foot thick LCRS granular layer (floor only),
- 8-oz/sy geotextile filter fabric, and,
- 1.5 foot thick operations layer.

#### **Side Slope Liner**

- prepared subgrade of compacted general fill,
- geosynthetic clay liner,
- 80-mil double textured HDPE geomembrane liner, and,
- 1.5 foot thick select operations layer.

60. During construction of the base liner for Unit 4C, the Discharger exhausted most of its easily accessible on-site clay deposits. The Discharger has identified additional clay deposits at the site, but they occur under significant overburden. Due to the difficulty and cost of mining the onsite clay, importing clay, or amending available on-site soils with bentonite, the Discharger proposed a new engineered alternative base liner design for future Unit expansions. The 27 May 2014 *Updated Liner Performance Evaluation* submitted by the Discharger substantiates that the proposed base liner design is the most cost-effective engineered alternative for the facility.
61. The Discharger adequately demonstrated that construction of a Subtitle D prescriptive standard liner would be unreasonably and unnecessarily burdensome when compared to the proposed engineered alternative design. The Discharger demonstrated that the proposed engineered alternative is consistent with the performance goals of the prescriptive standard and affords at least equivalent protection against water quality impairment.

62. The existing Class II surface impoundments (ELP and LSI-2) have a base liner system consisting of a (in ascending order):

- 1-ft low-permeability soil with a hydraulic conductivity of  $1 \times 10^{-6}$  cm/sec or less,
- secondary 60-mil double side textured HDPE geomembrane,
- double sided geocomposite (leak detection layer),
- geosynthetic clay liner, and,
- primary 60-mil single side textured HDPE geomembrane.

63. Any new Class II surface impoundment(s) needed for additional storage of leachate will be designed and constructed in accordance with the prescriptive and performance standards of Title 27. Engineered alternative liner designs meeting the performance standards of Title 27 may be proposed for Central Valley Water Board Executive Officer review and approval.

64. All compositely lined units at the facility have LCRSs. Leachate from South Canyon Unit (Unit 1B) collects in a sump at the western edge of the Unit. From there, leachate is pumped into two 12,000-gallon intermediate plastic storage tanks. Leachate is currently trucked from the South Canyon Unit intermediate holding tanks to the Class II surface impoundments on an as needed basis in order to maintain sufficient storage capacity. Leachate from Unit 2Ba collects in a sump at the southeastern corner of the Unit ~~and that is pumped-connected~~ to the Unit 4 LCRS sump. From there leachate is pumped to the Class II surface impoundments. Additionally, unlined Unit 1 has a toe drain system at the southern portion of the Unit that abuts the South Canyon Unit (Unit 1B). The Discharger monitors the toe drain system for liquids and transports any leachate that the system collects to the Class II surface impoundments.

65. All Units designed for containment of Class II wastes (leachate) have been or will be constructed to contain the 1,000-year, 24-hour storm event in addition to the 100-year wet season while still maintaining two feet of freeboard.

66. Any liquid detected between the primary and secondary liner of the Class II surface impoundment will be characterized to try and determine whether the primary liner is leaking. Liquid collected from between the liners will be returned to the surface impoundment. If it is determined that the primary liner is leaking, then the Discharger will be requested to immediately begin repairs.

67. A LCRS will be installed over the liner system described in Finding 61. The LCRS will consist of perforated HDPE pipes installed along the toes of slopes connected to a central perforated collection pipe that drains towards ~~a temporary collection~~ the LCRS sump at the north ~~central portion of Unit 4A of Unit 4C or in Unit 5.~~ The Any temporary LCRS sumps will be moved with each phase of construction, until such time ~~that a permanent it can be connected to the LCRS sump is constructed in both in Unit 4C and/or future sump in Unit 5.~~ Leachate collected from Unit 2Ba ~~will also be~~ is conveyed to the LCRS for Unit 4, where it ~~will flow to either the temporary or the permanent sump, depending on cell development.~~

Collected leachate will be pumped from the Unit LCRS sump to the Class II surface impoundments for storage and disposal. Peak daily leachate flow rates for the floor grades and sideslopes of Unit 4 are calculated to be 5,285 cubic feet per day (ft<sup>3</sup>/day) per acre. Unit 2Ba will contribute up to an additional 200 ft<sup>3</sup>/day to the Unit 4 LCRS. The pipe components of the Unit 4 LCRS have been designed to collect twice the peak daily leachate flow rate that was estimated using the HELP Model.

68. The LCRS design for future cells is as follows (in ascending order):

**LCRS Design: BaseFloor**

- Base liner geomembrane
- LCRS collection pipes
- one-foot thick drainage layer consisting of rounded to sub-rounded clean 3/8-inch minus gravel with a hydraulic conductivity of 0.3 cm/sec
- Eight oz/sy geotextile
- 18 inch thick soil operations layer.

**LCRS Design: Side Slopes**

- Side slope geomembrane
- 18 inch thick select operations layer with a minimum hydraulic conductivity of 0.02-3 cm/sec where needed for drainage. The select operations layer will provide sufficient thickness for protection of the underlying liner system as well as adequate drainage for twice the peak daily anticipated leachate generation.

69. A pan lysimeter will be installed beneath the LCRS sump and a portion of the LCRS piping for each new landfill cell/module for the purpose of unsaturated zone monitoring.

70. The 14 July 2015 Joint Technical Document includes a stability analysis for Units 4 and 5 pursuant to Title 27, section 21750(f)(5). Slope stability analyses were performed for the earthfill embankment and waste fill slopes. Interim conditions were analyzed assuming static conditions only. Final conditions were analyzed for static and seismic conditions. Rapid drawdown analysis was also performed for the eastern berm where storm water will be allowed to pond behind the berm. Critical cross-sections were selected based on their representation of maximum fill height, maximum and minimum excavation depths, and base grade configurations. Two-dimensional slope stability analyses were performed using the software program SLOPE/W. Slope stability was evaluated using the limit equilibrium procedures based on the Spencer method of slices. The Discharger's stability analysis includes components to demonstrate the integrity of the landfill foundation, final slopes, and containment systems under both static and dynamic conditions throughout the landfill's life including the closure period and post-closure maintenance period. The stability analysis demonstrates that the structural components of Units 4 and 5 will withstand the forces of the MPE without failure of the containment systems or environmental controls.

71. This Order approves the Discharger's proposed liner system for future modules as described in Finding 61 and requires that the Discharger submit design plans and construction quality assurance (CQA) plans for each new module or modules for review and approval at least 180 days prior to construction.

### **LANDFILL CLOSURE**

72. Title 27, section 21090 provides the minimum prescriptive final cover components for landfills consisting of, in ascending order, the following layers:
- a. Two-foot thick soil foundation layer.
  - b. One-foot thick soil low flow-hydraulic conductivity layer, less than  $1 \times 10^{-6}$  cm/s or equal to the hydraulic conductivity of any bottom liner system.
  - c. Geomembrane layer (this layer is required for composite-lined landfills for equivalency to bottom liner).
  - d. One-foot thick soil erosion resistant/vegetative layer.
73. Title 27 allows engineered alternative final covers provided the alternative design will provide a correspondingly low flow-through rate throughout the post-closure maintenance period.
74. The Discharger submitted a 27 August 2015 *Preliminary Closure and Postclosure Maintenance Plan* (PCPCMP) for closure and post-closure maintenance of all the unlined and composite-lined landfill units at the facility. In 2008 the majority of Unit 1 was final closed with the exception on an approximately 3.5 acre area at the northwest corner of Unit 1. A 2008 survey indicated that this area had not reached final grade and approximately 75,000 cubic yards of capacity remained in this area. On 2 January 2014, Central Valley Water Board staff approved a request to extend the final closure of this area of Unit 1 until 1 November 2024 so that the remaining capacity could be used and the Unit could reach final design grades. Former Unit 2C was clean closed in 2008. The former designated waste trench was clean closed in 2004. The unclassified North of Cambridge Road Unit was final closed in 2007. The western portion of Unit 2BA was partial final closed in 2008. Final filling and closure of the remaining unclosed portion of Unit 2Ba has been deferred until the toe of the Unit 4A waste fill slope is buttressed with Unit 5 waste. The South Canyon Unit was final closed in 2008.
75. The Discharger proposes an engineered alternative final cover for composite-lined landfill Unit 2Ba, South Canyon Unit, Unit 4 and Unit 5, consisting of, in ascending order, the following layers:
- a. Two-foot thick foundation layer.
  - b. Geosynthetic clay liner.
  - c. 60-mil linear low density polyethylene (LLDPE) AGRU-brand super gripnet geomembrane installed with stud side up
  - d. 8 oz/sy geotextile

- e. One-foot thick vegetative layer.
76. The Discharger proposes an engineered alternative final cover for unlined landfill units Unit 1, Unit 2B, and the North of Cambridge Road Unit consisting of, in ascending order, the following layers:
- a. Two-foot thick soil foundation layer.
  - b. 60-mil LLDPE AGRU-brand super gripnet geomembrane installed with stud side up.
  - c. 8 oz/sy geotextile
  - d. One-foot thick soil erosion resistant soil layer, with vegetation.
77. The Discharger's 27 August 2015 PCPCMP included an analysis of the proposed engineered alternative final cover. The PCPCMP performed a comparison of the Title 27 prescriptive liner with the proposed engineered alternative design. The comparison showed that using a 60-mil HDPE geomembrane had a slower infiltration rate than the prescriptive standard of 12 inches of compacted clay, and that using a geosynthetic clay liner had a slower infiltration rate than the prescriptive standard of 12 inches of compacted clay.
78. The Discharger has demonstrated that the engineered alternative final cover meets the performance goals of Title 27 and that it is equivalent to the prescriptive standard.
79. Side slopes for the closed landfill will be sloped at 3H:1V or less and will include 15-foot wide benches every 50 vertical feet as required by Title 27.
80. The Discharger performed a slope stability analysis for the proposed final cover systems. The 14 July 2015 Joint Technical Document includes a 12 June 2015 *Stability Analysis* of the proposed cover systems. The *Stability Analysis* evaluated static, seismic and infinite slope stability of the proposed final cover system. The Discharger's static and dynamic stability analysis demonstrates that the side slopes of the final cover will be stable in accordance with the requirements of Title 27.
81. Pursuant to Title 27, section 21090(e)(1), this Order requires a survey of the final cover following closure activities for later comparison with iso-settlement surveys required to be conducted every five years.
82. This Order approves the proposed final covers and requires that a final closure and post-closure maintenance plan, design documents, and CQA plan be submitted for review and approval at least 180 days prior to actual closure.

#### **LANDFILL POST-CLOSURE MAINTENANCE**

83. The Discharger submitted a 27 August 2015 PCPCMP for closure and post-closure maintenance of Unit 1, Unit 2B, Unit 2Ba, South Canyon Unit, North of Cambridge Road Unit, Unit 4 and Unit 5. The plan includes inspection, maintenance, and monitoring of the landfill during the post-closure maintenance period, and includes a post-closure

maintenance cost estimate for the entire facility. Inspection and maintenance will include the condition of the final cover, drainage features, LCRS, groundwater monitoring wells, unsaturated zone monitoring points, access roads, landfill gas system, and site security. The plan will be implemented for a minimum period of 30 years or until the waste no longer poses a threat to environmental quality, whichever is greater.

84. Once every five years during the post-closure maintenance period, aerial photographic maps of the closed landfill area will be made to identify and evaluate landfill settlement. Iso-settlement maps will be prepared to determine the amount of differential settlement occurring over the previous five years. Pursuant to Title 27, section 21090(e)(2), this Order requires iso-settlement maps to be prepared and submitted every five years.
85. The completed final cover will be periodically tested for damage or defects by monitoring surface emissions pursuant to California Code of Regulations, title 17, section 95471(c) and Title 27, section 21090(a)(4)(A). Defects will be repaired and tested for adequacy based on the closure CQA Plan.

#### **FINANCIAL ASSURANCES**

86. Title 27, sections 21820 and 22206 require a cost estimate for landfill closure. The cost estimate must be equal to the cost of closing the landfill at the point in its active life when the extent and manner of operation would make closure the most expensive. When closing units in phases, the estimate may account for closing only the maximum area or unit of a landfill open at any time. The Discharger's 27 August 2015 PCPCMP includes a cost estimate for landfill closure. The lump sum estimate is for the cost to close largest future area needing closure at any one time. The total amount of the closure cost estimate in 2015 dollars is \$9.216 million. This Order requires that the Discharger maintain financial assurance with the California Department of Resources Recycling and Recovery (CalRecycle) in at least the amount of the closure cost estimate. As of 2015, the balance of the closure fund was \$9.216 million.
87. Title 27, sections 21840 and 22211 requires a cost estimate for landfill post-closure maintenance. The Discharger's 27 August 2015 PCPCMP includes a cost estimate for landfill post-closure maintenance. The amount of the cost estimate for post-closure maintenance in 2015 dollars is \$3.485 million. This Order requires that the Discharger maintain financial assurance with CalRecycle in at least the amount of the post-closure maintenance cost estimate adjusted annually for inflation. As of 2015, the balance of the post-closure maintenance fund was \$3.485 million.
88. Title 27, section 22221 requires a cost estimate for corrective action of all known or reasonably foreseeable releases. The Discharger submitted a 27 August 2015 cost estimate of \$495,430.85 for corrective action of all known or reasonably foreseeable releases. This Order requires that the Discharger maintain financial assurance with the CalRecycle in at least the amount of the cost estimate adjusted annually for inflation. As of 2015, the balance of the corrective action fund was \$495,430.85.



89. Title 27 section 22100(b) requires owners and operators of disposal facilities that are required to be permitted as solid waste landfills to provide cost estimates for initiating and completing corrective action for known or reasonably foreseeable releases of waste. Title 27 section 22101 requires submittal of a *Water Release Corrective Action Estimate* and a *Non-Water Release Corrective Action Cost Estimate*. The *Water Release Corrective Action Estimate* is for scenarios where there is statistically significant evidence of a release of waste to ground or surface water when comparing point-of-compliance analyte concentrations to background concentrations. The *Non-Water Release Corrective Action Cost Estimate* is for complete replacement of the landfill final cover system, however a site-specific corrective action plan pursuant to Title 27 section 22101(b)(2) may be provided in lieu of the final cover replacement cost estimate. Title 27 section 22221 requires establishment of financial assurances in the amount of an approved *Water Release Corrective Action Estimate* or an approved *Non-Water Release Corrective Action Cost Estimate*, whichever is greater.

#### CEQA AND OTHER CONSIDERATIONS

90. The Final Environmental Impact Report (EIR 1-89; SCR# 89052316) for the facility was certified on 7 June 1990 by the Shasta County Planning Commission for Use Permit No. 68-89. Use Permit No. 68-89 was later amended with the adoption of a Mitigated Negative Declaration for Use Permit No. 68-89A, which allowed tire shredding. On 12 October 2000, the Shasta County Planning Commission adopted a Mitigated Negative Declaration for new Use Permit No. 00-24, which additionally required increased litter control along site access roads, specifically West Anderson Drive and portions of Gas Point Road, and a ten-year renewal ending in 2010. Amended Use Permit 00-24A was issued to the Discharger on 10 April 2008 allowing the increase of the maximum permitted elevation from 760 feet MSL to 769.5 feet MSL within a 12 acre area of Unit 1. The Solid Waste Facility Permit revision to increase the height was approved and issued on 23 June 2008. The new Use Permit 10-001 was issued on 12 August 2010 with adoption of a Mitigated Negative Declaration (State Clearinghouse #2010072033) allowing for continued operation of the facility until final capacity is reached. A minor modification to Use Permit UP10-001M was approved on 14 March 2014 for a recycling transfer operation within lined portions of Unit 4. Compliance with this Order, including implementation of the monitoring and reporting program, will mitigate or avoid potential significant impacts to water quality.

91. The action to revise waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resource Code section 21000, et seq., and the CEQA guidelines, in accordance with Title 14, section 15301.

92. This order implements:

- a. *The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition;*

- b. The prescriptive standards and performance goals of California Code of Regulations, title 27, section 20005 et seq., effective 18 July 1997, and subsequent revisions;
  - c. State Water Board Resolution 93-62, *Policy for Regulation of Discharges of Municipal Solid Waste*, adopted 17 June 1993, and revised on 21 July 2005;
  - d. The applicable provisions of Title 40 C.F.R. section 258 "Subtitle D" federal regulations as required by State Water Board Resolution 93-62.
93. Based on the threat and complexity of the discharge, the facility is determined to be classified Category 2-B as defined below:
- a. Category 2 threat to water quality, defined as, "Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance."
  - b. Category B complexity, defined as, "Any discharger not included in Category A that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal), or any Class 2 or Class 3 waste management units."
94. Water Code section 13267(b) provides that: "In conducting an investigation specified in subdivision (a), the Regional Board may require that any person who has discharged, discharges, or is suspected of having discharge or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.
95. The technical reports required by this Order and the attached "Monitoring and Reporting Program No. R5-2016-XXXX" are necessary to assure compliance with these waste discharge requirements. The Discharger owns and operates the facility that discharges the waste subject to this Order.
96. Due to the presence of unlined waste disposal units at the site (Unit 1, Unit 2, Unit 2A, and North of Cambridge Road Unit), waste discharged at the site could be discharged to waters of the State as a result of permitted activities at the facility. This discharge will not degrade underlying groundwater at the site due to separation of the waste from the regional groundwater aquifer by over 150 feet of clay-rich, relatively impermeable soil and attenuation of expected waste constituents in the unsaturated clay soil. Compliance with this Order, the attached Standard Provisions and Reporting Requirements, and Monitoring and Reporting Program R5-2016-XXXX represent best efforts to control the

discharge of waste to waters of the State. Therefore, the site complies with the Anti-Degradation Policy.

### **PROCEDURAL REQUIREMENTS**

97. All local agencies with jurisdiction to regulate land use, solid waste disposal, air pollution, and to protect public health have approved the use of this site for the discharges of waste to land stated herein.
98. The Central Valley Water Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
99. The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.
100. Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality)

or will be provided upon request.

IT IS HEREBY ORDERED, pursuant to California Water Code sections 13263 and 13267, that Order No. R5-2005-0118 is rescinded except for purposes of enforcement, and that Anderson Landfill, Inc., its agents, successors, and assigns, in order to meet the provisions of Division 7 of the California Water Code and the regulations adopted thereunder, shall comply with the following:

#### **A. PROHIBITIONS**

1. The discharge of 'hazardous waste' or 'designated waste' is prohibited. For the purposes of this Order, the term 'hazardous waste' is as defined in California Code of Regulations, Title 23, section 2510 et seq., and 'designated waste' is as defined in Title 27.

2. The Discharger shall comply with all Standard Prohibitions listed in Section C of the Standard Provisions and Reporting Requirements (SPRRs) dated December 2015 which are attached hereto and made part of this Order by reference.

## **B. DISCHARGE SPECIFICATIONS**

1. The Discharger shall only discharge the wastes listed or allowed under the Waste Classification and Unit Classification section in the Findings of this Order.
2. The Discharger shall discharge treated wood wastes only to landfill units equipped with a composite liner system and a leachate collection and removal system (i.e., Unit 4 and future modules listed in Finding 7 of this Order). If a verified release is detected from the waste management unit where treated wood is disposed, the disposal of treated wood shall be terminated at the unit with the verified release until corrective action ceases the release.
3. The Discharger shall manage treated wood waste in accordance with California Health and Safety Code sections 25143.1.5 and 25150.7 and shall comply with all prohibitions listed in Title 22, section 67386.3.
4. The Discharger may not use any material as alternative daily cover (ADC) that is not listed as approved ADC in the Findings of these WDRs unless and until the Discharger has demonstrated it meets the requirements in Title 27, section 20705, and the Discharger has received approval that it may begin using the material as ADC.
5. The Discharger shall use approved ADC only in internal areas of the landfill that do not drain outside of the limits of the contiguous landfill units unless the Discharger demonstrates that runoff from the particular ADC is not a threat to surface water quality and the demonstration has been approved. This demonstration may take removal of sediment or suspended solids into account for landfills where surface water drains to a sedimentation basin.
6. The Discharger shall, in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order. If the Discharger is unable to remove and relocate the waste, the Discharger shall submit a report to the Central Valley Water Board explaining how the discharge occurred, why the waste cannot be removed, and any updates to the waste acceptance program necessary to prevent re-occurrence. If the waste is a hazardous waste, the Discharger shall immediately notify the Department of Toxic Substances Control.
7. Leachate and/or landfill gas condensate may be returned only to the South Canyon Unit, Unit 2Ba, Unit 4 and future composite lined modules listed in Finding 7 of this Order in accordance with Standard Discharge Specifications D.2 through D.4 of the SPRRs.

8. The Discharger shall comply with all Standard Discharge Specifications listed in Section D of the SPRRs dated December 2015 which are attached hereto and made part of this Order by reference.

### C. FACILITY SPECIFICATIONS

1. Class II surface impoundments shall be operated and maintained to ensure that sufficient freeboard exists to accommodate seasonal precipitation and the design storm listed in Title 27, Table 4.1. Two feet of freeboard or more shall be maintained at all times during the operational life of the landfill and throughout the post-closure maintenance period.
2. The Discharger shall comply with all Standard Facility Specifications listed in Section E of the SPRRs dated December 2015 which are part of this Order.
3. The Discharger shall comply with all applicable Storm Water Provisions listed in Section L of the SPRRs dated December 2015 which are attached hereto and made part of this Order by reference.

### D. CONSTRUCTION SPECIFICATIONS

1. The Discharger shall construct the base liner and side slope liner of new Class III landfill units as described in Finding 7 of this Order in accordance with the following approved engineered alternative liner design:
  - a. An engineered alternative composite **base-floor liner system** that is comprised, in ascending order, of the following:
    - 1) Prepared subgrade;
    - 2) Geosynthetic clay liner;
    - 3) 80-mil double-side textured HDPE geomembrane;
    - 4) 12-inch thick granular layer with minimum hydraulic conductivity of 0.3 cm/sec;
    - 5) 1.5-foot thick operations layer
  - b. An engineered alternative composite **side slope liner system** that is comprised, in ascending order, of the following:
    - 1) Prepared subgrade;
    - 2) Geosynthetic clay liner;
    - 3) 80-mil double-side textured HDPE geomembrane;

- 4) 1.5-foot thick select operations layer with minimum hydraulic conductivity of 0.3 cm/sec where needed for drainage. The select operations layer will provide sufficient thickness for protection of the underlying liner system as well as adequate drainage for twice the peak daily anticipated leachate generation rates.
2. Future Class II surface impoundments installed for the storage of leachate shall be designed and constructed to meet performance standards of Title 27, sections 20310 and 20375 and the Construction Standards listed in Title 27, Table 4.1.
3. Class II surface impoundment containment systems shall include a composite liner system with (1) an upper synthetic flexible membrane liner component (that's at least 60-mil thick for HDPE) installed in direct and uniform contact with a lower compacted soil component at least two-feet thick with a hydraulic conductivity of  $1 \times 10^{-7}$  cm/sec or less (Prescriptive Standard); or (2) a composite liner system with an engineered alternative design that meets the performance criteria for Class II Units and surface impoundments in accordance with Title 27. Liner systems utilizing an engineered alternative design shall comply with requirements of Title 27, section 20080(c) and (d). For double composite liner systems, a LCRS is required to be installed between the primary and secondary liners.
4. Class II surface impoundments shall include a pan lysimeter or other type of unsaturated zone monitoring device(s) installed beneath the lowest point of the base liner system to provide the earliest possible detection of a release from the Unit.
5. The Discharger shall not proceed with liner construction (other than earth moving and grading in preparation for liner construction) until the construction plans, specifications, and all applicable CQA plans have been approved.
6. The Discharger may propose changes to the liner system design prior to construction, provided that the engineering properties of the components are not substantially reduced, and the proposed liner system results in the protection of water quality equal to or greater than the design prescribed by Title 27 and this Order. The proposed changes may be made following approval by the Executive Officer. Substantive changes to the design require reevaluation as an engineered alternative and approval by the Central Valley Water Board in revised WDRs.
7. The Discharger shall comply with all Standard Construction Specifications listed in Section F of the SPRRs dated December 2015 which are attached hereto and made part of this Order by reference.
8. The Discharger shall comply with all Storm Water Provisions listed in Section L of the SPRRs dated December 2015 which are attached hereto and made part of this Order by reference.

## **E. CLOSURE AND POST-CLOSURE MAINTENANCE SPECIFICATIONS**

1. The Discharger shall submit a final or partial final closure and post-closure maintenance plan at least two years prior to proposed closure of any portion of the landfill in accordance with requirements in Section G of the Standard Closure and Post-Closure Specifications in the SPRRs.
2. The Discharger shall close landfill units with a final cover as proposed in the 27 August 2015 PCPCMP and as approved by this Order. The components of the approved final cover as proposed in the PCPCMP are listed in Finding 75.
3. The Discharger shall obtain revised WDRs prior to closure with any other final cover design than the design or designs approved in this Order, except when modifications are necessary for problematic areas of the final cover needing repair so long as the barrier layer (e.g., geomembrane, GCL, and/or compacted clay layer) remains intact, and the modifications are approved by Central Valley Water Board staff.
4. The Discharger shall close the landfill with side slopes at steepness of 3H:1V or less, and top deck areas shall be sloped at three percent or greater.
5. The Discharger shall install an active landfill gas extraction system for the closed landfill unit during landfill closure, and landfill gas shall be extracted from closed landfill units until such time that the landfill gas is no longer a threat to water quality as documented by the Discharger and approved by the Executive Officer.
6. The Discharger shall seal the edges of the final cover by connecting the cover geomembrane to the liner geomembrane.
7. The Discharger shall test the critical interfaces of the final cover in a laboratory to ensure minimum design shear strengths are achieved and include the results in the final documentation report.
8. The Discharger shall ensure that the vegetative/erosion resistant layer receives necessary seed, binder, and nutrients to establish the vegetation proposed in the final closure plan. The Discharger shall install necessary erosion and sedimentation controls to prevent erosion and sediment in runoff from the closed landfill during the period the vegetation is being established.
9. The Discharger shall comply with all Standard Closure and Post-Closure Specifications listed in Section G and all Standard Construction Specifications that are applicable to closure in Section F of the SPRRs dated December 2015 which are attached hereto and made part of this Order by reference.

## **F. FINANCIAL ASSURANCE SPECIFICATIONS**

1. The Discharger shall obtain and maintain assurances of financial responsibility with CalRecycle for closure and post-closure maintenance for the landfill in at least the amounts described in Findings 86 and 877, adjusted for inflation annually. A report regarding financial assurances for closure and post-closure maintenance shall be submitted to the Central Valley Water Board by **1 June of each year**. This may be the same report that is submitted to CalRecycle for this purpose. If CalRecycle determines that either the amount of coverage or the mechanism is inadequate, then within 90 days of notification, the Discharger shall submit an acceptable mechanism to CalRecycle and the Central Valley Water Board for at least the amount of the approved cost estimate.
2. The Discharger shall update the PCPCMP any time there is a change that will increase the amount of the closure and/or post-closure maintenance cost estimate. The updated PCPCMP shall be submitted to the Central Valley Water Board, the Local Enforcement Agency, and CalRecycle. The PCPCMP shall meet the requirements of Title 27, section 21769(b), and include a lump sum estimate of the cost of carrying out all actions necessary to close each Unit, to prepare detailed design specifications, to develop the final closure and post-closure maintenance plan, and to carry out the first thirty years of post-closure maintenance. Reports regarding financial assurance required in F.1 above shall reflect the updated cost estimate.
3. The Discharger shall obtain and maintain assurances of financial responsibility with CalRecycle for initiating and completing corrective action for all known or reasonably foreseeable releases from the landfill in at least the amount of the annual inflation-adjusted cost estimate described in Finding 88. A report regarding financial assurances for corrective action shall be submitted to the Central Valley Water Board by **1 June of each year**. This may be the same report that is submitted to CalRecycle for this purpose. If CalRecycle determines that either the amount of coverage or the mechanism is inadequate, then within 90 days of notification, the Discharger shall submit an acceptable mechanism to CalRecycle and the Central Valley Water Board for at least the amount of the approved cost estimate.
4. The Discharger shall comply with all Standard Financial Assurance Specifications listed in Section H of the SPRRs dated December 2015 which are attached hereto and made part of this Order by reference.



## **G. MONITORING SPECIFICATIONS**

1. The Discharger shall comply with the detection monitoring program provisions of Title 27 for groundwater, surface water, and the unsaturated zone, and in accordance with Monitoring and Reporting Program (MRP) No. R5-2016-XXXX, and the Standard Monitoring Specifications listed in Section I of the SPRRs dated December 2015 which are attached hereto and made part of this Order by reference.
2. The Discharger shall, for any landfill unit in a corrective action monitoring program, comply with the corrective action monitoring program provisions of Title 27, MRP No. R5-2016-XXXX, and the Standard Monitoring Specifications listed in Section I of SPRRs dated December 2015 which are attached hereto and made part of this Order by reference.
3. The Discharger shall comply with the Water Quality Protection Standard as specified in this Order, MRP No. R5-2016-XXXX, and the SPRRs dated December 2015 which are attached hereto and made part of this Order by reference.
4. The concentrations of the constituents of concern in waters passing the Point of Compliance (defined pursuant to Title 27, section 20164 as a vertical surface located at the hydraulically downgradient limit of the landfill unit that extends through the uppermost aquifer underlying the unit) shall not exceed the concentration limits established pursuant to MRP No. R5-2016-XXXX.
5. For each monitoring event, the Discharger shall determine whether the landfill is in compliance with the Water Quality Protection Standard using procedures specified in MRP No. R5-2016-XXXX and the Standard Monitoring Specifications in Section I of the SPRRs dated December 2015 which are attached hereto and made part of this Order by reference.
6. As specified in MRP No. R5-2016-XXXX, the Discharger shall enter all monitoring data and monitoring reports into the online Geotracker database as required by Division 3 of Title 27 and Chapter 30, Division 3 of Title 23.
7. The Discharger shall comply with all Standard Monitoring Specifications and Response to a Release specifications listed in Sections I and J of the SPRRs dated December 2015 which are attached hereto and made part of this Order by reference.

## **H. PROVISIONS**

1. The Discharger shall maintain a copy of this Order at the facility, including the MRP No. R5-2016-XXXX and the SPRRs dated December 2015 which are part of this Order, and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel.

2. The Discharger shall comply with all applicable provisions of Title 27 and Subtitle D that are not specifically referred to in this Order.
3. The Discharger shall comply with MRP No. R5-2016-XXXX, which is incorporated into and made part of this Order by reference.
4. The Discharger shall comply with the applicable portions of the Standard Provisions and Reporting Requirements for Waste Discharge Requirements for Nonhazardous Solid Waste Discharges Regulated by Subtitle D and/or Title 27, dated December 2015, which are attached hereto and made part of this Order by reference.
5. If there is any conflicting or contradictory language between the WDRs, the MRP, or the SPRRs, then language in the WDRs shall supersede either the MRP or the SPRRs, and language in the MRP shall supersede the SPRRs.
6. All reports required by this Order shall be submitted pursuant to Water Code section 13267.
7. The Discharger shall complete the tasks contained in these waste discharge requirements in accordance with the following time schedule:

| <u>Task</u>   | <u>Compliance Date</u>                        |
|---|---|
| <b>A. Construction Plans</b>  |   |
| Submit construction and design plans for review and approval.<br>(see all Construction Specifications in Section D, above and Section F of the SPRRs.)  | <b>90 days prior to proposed construction</b> |
| <b>B. Construction Report</b>   |   |
| Submit a construction report for review and approval upon completion demonstrating construction was in accordance with approved construction plans (see Standard Construction Specification F.27 in the SPRRs).                 | <b>60 days prior to proposed discharge</b>    |
| <b>C. Final Closure Plans</b>   |   |
| Submit a final or partial final closure and post-closure maintenance plan, design plans, and CQA plan for review and approval (see all Closure and Post-Closure Specifications in Section E, above and Section G of the SPRRs). | <b>Two years prior to closure</b>             |

8. The Discharger shall comply with all General Provisions listed in Section K of the SPRRs dated December 2015 which are part of this Order.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order issued by the California Regional Water Quality Control Board, Central Valley Region, on \_\_\_\_\_.

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PAMELA C. CREEDON, Executive Officer

GCS